

RECOMMENDATIONS

- Use permanent, primarily earthen levees
- Use hydraulic dredging and hydraulic transport to reduce cost. (Cost should not be that expensive \$40/cy, in Holland, \$7 /cy meter)
- Consider sand core levee with soil bentonite cutoff wall and clay cover. (Wide footprint required for seepage control).
- Ground improvement (DMM) is preferred option where footprint must be narrowed for economics.

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- Incorporate geotechnical field instrument to monitor performance during construction. Use remote monitoring instruments for long term health monitoring and for rapid post-hurricane damage assessment.
- Allow overtopping of the main line levee and build a secondary levee where economical to contain water. Also allow overtopping where a large body of water would absorb the water from overtopping. Include depressed areas to allow controlled overtopping

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- Factors of Safety -Consider consequences of failure and risk analysis to determine factors of safety. Need to check areas that did not fail during Katrina as well as areas that did. But for now use the factors of safety that have been used historically, we do not have better numbers now.
- QA/QC – Fund the project with adequately trained and qualified people. Maintain design and construction records in electronic database for easy future reference.

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DISCUSSION POINTS

- Temporary or permanent?
- Use permanent, primarily earthen levees
- Cost should not be that expensive \$40/cy, in Holland, \$7 /cy meter
- Dredging and hydraulic transport (possible recommendation)
- Potential sand levee with soil bentonite cutoff wall. Clay cover. Wide footprint required for seepage control.
- Instrument to monitor settlement, control construction, etc. Remote health monitoring after construction.
- Ground improvement (DMM) is preferred option where footprint must be narrowed for economics.
- Permanent remote instrumentation, for long term monitoring and post hurricane damage assessment.
- Overtopping – Include depressed areas to allow controlled overtopping.
- Allow overtopping of the main line levee and build a secondary levee where economical to contain water. Also allow overtopping where a large body of water would absorb the water from overtopping.
- Think about what happens if levee fails. Consider back levees to compartmentalize water in failed areas. (eg similar to water tight chambers in ships).
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